

What is claimed is:

1 1. An interposer for providing electrical connections between  
2 lands of a Land Grid Array (LGA) device and corresponding lands  
3 of an electronic assembly, said interposer comprising:

4 an interposer frame comprising a substantially planar  
5 insulating sheet defining voids through said insulating sheet  
6 perpendicular to a primary plane of the interposer frame, said  
7 voids provided for the insertion of contacts spaced in a grid-  
8 array;

9 a plurality of flexible metal conductive contacts each  
10 having a first contact end and a second contact end, and wherein  
11 said contacts are inserted within and through the voids defined  
12 by said interposer frame such that said first contact extends  
13 above a top surface of said interposer frame and said second  
14 contact extends below a bottom surface of said interposer frame;  
15 and

16 an elastic adhesive disposed between said contacts and said  
17 interposer frame and adhered to said interposer frame, whereby  
18 said contacts are mechanically retained to said interposer frame  
19 while permitting travel of said contacts in a direction  
20 perpendicular to said interposer frame via flexure of said  
21 elastic adhesive.

1 2. The interposer of Claim 1, wherein said elastic adhesive is  
2 disposed completely around a periphery of a portion of said voids  
3 and further adhered to said contacts, said portion being located  
4 within said voids between said top surface and said bottom  
5 surface of said interposer frame, whereby said contacts are  
6 surrounded by said adhesive and retained to said interposer by  
7 said adhesive.

1 3. The interposer of Claim 1, wherein said elastic adhesive is  
2 disposed partially around a periphery of a portion of said voids  
3 and further adhered to said contacts, said portion being located  
4 within said voids between said top surface and said bottom  
5 surface of said interposer frame, whereby said contacts are  
6 surrounded by said adhesive and retained to said interposer by  
7 said adhesive.

1 4. The interposer of Claim 1, wherein said contacts are spring  
2 contacts comprising a curved metal form.

1 5. The interposer of Claim 4, wherein said elastic adhesive is  
2 disposed only within a central portion of said curved metal form  
3 and wherein said elastic adhesive is bonded to said interposer  
4 frame in a direction perpendicular to a direction of curvature of  
5 said contacts, whereby said contacts are retained.

1 6. The interposer of Claim 5, wherein said elastic adhesive is  
2 further adhered to said contacts, whereby said contacts are  
3 retained within said interposer frame.

1 7. The interposer of Claim 5, wherein said elastic adhesive is a  
2 self-healing adhesive, whereby said contacts are be inserted in  
3 said voids after cure of the elastic adhesive, whereby said  
4 contacts are retained by displacement of said elastic adhesive  
5 with no adhesion between said contacts and said elastic adhesive.

1 8. The interposer of Claim 1, wherein said contacts are fuzz  
2 buttons comprising bundled wire.

1 9. The interposer of Claim 8, wherein said bundled wire is a  
2 single wire for each contact that is spun into a button form for  
3 providing substantially cylinder-shaped contacts, and wherein  
4 said elastic adhesive is disposed completely around a  
5 circumference of at least a portion of said contacts for  
6 maintaining said cylindrical shape of said bundled wire.

1 10. A method for manufacturing an interposer for providing  
2 electrical connections between lands of a Land Grid Array (LGA)  
3 device and corresponding lands of an electronic assembly, said  
4 method comprising:

5 providing an interposer frame having voids therethrough at  
6 contact positions of said lands;

7 inserting into said voids in said interposer frame a  
8 plurality of flexible metal conductive contacts; and

9 depositing an elastic adhesive between each of said contacts  
10 and said interposer frame, whereby said contact is mechanically  
11 retained to said interposer frame while permitting travel of said  
12 contact in response to flexure of said elastic adhesive.

1 11. The method of Claim 10, wherein said depositing is performed  
2 prior to performing said inserting.

1 12. The method of Claim 11, further comprising curing said  
2 adhesive prior to performing said inserting.

1 3. The method of Claim 10, wherein said inserting is performed  
2 prior to said depositing and wherein said depositing deposits  
3 adhesive around the periphery of said contacts.

1 14. The method of Claim 13, wherein said inserting inserts fuzz  
2 buttons and wherein said depositing deposits said adhesive  
3 completely around a periphery of said voids, whereby a shape of  
4 said fuzz buttons is retained by said elastic adhesive.

1 15. The method of Claim 10, wherein said inserting is performed  
2 prior to said depositing and wherein said depositing deposits  
3 adhesive within a body of said contacts.

- 1 16. The method of Claim 10, wherein said adhesive is deposited
- 2 only in an interior of said voids, whereby said adhesive does not
- 3 extend to a top nor a bottom surface of said interposer frame.

1 17. An interposer for providing electrical connections between  
2 lands of a Land Grid Array (LGA) device and corresponding lands  
3 of an electronic assembly, said interposer comprising:

4 an interposer frame comprising a substantially planar  
5 insulating sheet defining voids through said insulating sheet  
6 perpendicular to a primary plane of the interposer frame, said  
7 voids provided for the insertion of contacts spaced in a grid-  
8 array;

9 a plurality of flexible metal conductive contacts each  
10 having a first contact end and a second contact end, and wherein  
11 said contacts are inserted within and through the voids defined  
12 by said interposer frame such that said first contact extends  
13 above a top surface of said interposer frame and said second  
14 contact extends below a bottom surface of said interposer frame;  
15 and

16 means for mechanically retaining said contacts to said  
17 interposer frame, whereby said contacts are mechanically retained  
18 to said interposer frame while permitting travel of said contacts  
19 in a direction perpendicular to said interposer frame.

1 8. The interposer of Claim 17, wherein said contact retaining  
2 means is bonded to said contacts.

1 19. The interposer of Claim 17, wherein said contacts are bundled  
2 wire having a substantially cylindrical shape and further  
3 comprising means for maintaining a shape of said bundled wire.

1 20. The interposer of Claim 19, wherein said shape maintaining  
2 means is said contact retaining means.